Name: Date:

01. Any angle in the semicircle is

 (a). Right angle   (b). 180°   (c). 360°   (d). none of these

02. If the angles subtended by two chords of a circle at the centre are equal the chords are

  (a). not equal   (b). equal   (c). angle equal   (d). line equals

03. How many circles passing through three non-collinear points?

  (a). one   (b). two   (c). three   (d). four

04. The constant distance is called

  (a). diameter   (b). radius   (c). centre   (d). circle

05. PS and RS are two chords of a circle such that PQ=10cm and Rs= 24cm and PQ||RS. The distance between PQ and RS is 17cm. Find the radius of circle

  (a). 10cm   (b). 13cm   (c). 15cm   (d). none of these

06. A circle is drawn. It divides the plane into

  (a). 3 Parts   (b). 4 Parts   (c). 5 Parts   (d). No Parts

07. The relation between diameter and radius of a circle is

  (a). $r=2d$ (b). $d=r$ (c). $d=2r$ (d). $d=2\pi r$

08. If P and Q are any two Points on a circle, then PQ is called a

  (a). diameter   (b). secant   (c). chord   (d). radius

09. What is a diameter

  (a). $r = 2d$ (b). $d =2\pi r$ (c). $d = r$ (d). $d = 2 r$

10. Two point on a circle shows the

  (a). radius   (b). chord   (c). secant   (d). diameters

11. The whole are of a circle is called

  (a). circumference   (b). semi-circle   (c). sector   (d). segment

12. One half of the whole are of a circle

  (a). semi-circle   (b). circumference   (c). segment   (d). sector

13. Circle having same centre are said to be

  (a). Concentric   (b). circle   (c). chord   (d). secant

14. The line which meet a circle in two points is called a

  (a). chord of circle   (b). diameter   (c). radius   (d). secant of circle

15. The sum of either pair of opposite angle of cyclic quadrilateral is

  (a). 360°   (b). 90°   (c). 180°   (d). 270°

16. Two circle are congruent if they have equal.

  (a). diameter   (b). radius   (c). chord   (d). secant

DCA CLASSES

Q01. AB = DC and diagonal AC and BD intersect at P in cyclic quadrilateral Prove PAB PDC Δ ≅ Δ

Q02. Prove that, ∠CAD = ∠CBD, if ABC and ADC are two right triangles with common hypotenuse AC.

Q03. Show that, DE||BC, in isosceles triangle ABC, AB = AC and B, C intersects the sides AB and AC at D & E.

Q04. Prove cyclic parallelogram is a rectangle.

Q05. Pair of opposite sides of a cyclic quadrilateral are equal, prove that the other two sides are parallel.

Q06. ABCD is a rectangle. Prove that the centre of the circle through A, B, C, D is the Point intersection of its diagonals.

Q07. A line is passing through the centre of a circle. If it bisects chord AB and CD of the circle. Prove AB||CD

Q08. AB and CB are two chords of circle to Prove that BO bisects ∠ABC.

Q09. If BC is diameter of circle with centre O and OD is ⊥ to chord AB so, prove CA=2 OD

Q10. Given a method to find the centre of a circle.

Q11. In circle bisector AD of BAC ∠ of ABC Δ Passes through the center O of the circum circle of ΔABC. Prove AB=AC.

Q12. Prove that the circle drawn with the equal sides as a diameter passes through the Point D. if D is the mid-Point of BC of an isosceles triangle ABC with AB=AC

Q13. C point is taken so that m∠CAB =30^0 from a semi-circle with AB as diameter. So find m∠ACB and m∠ABC.

Q14. Two different circle can't interact each other at more than two points so, prove it.

Q15. O is the centre and OP AB ⊥ so, find the length of the chord AB.

Q16. If OA is the Per perpendicular to CB, find the length of AB.

Q17. AB is chord of a circle and AB Produced to C such that BC=OB and CO joined and produce the circle the circle and meet to D if ∠ACD=y°, ∠AOD=x° prove that x=3y.

Q18. Prove that ∠XPZ = 2(∠XZY + ∠YXZ) if O id the centre of Circle.

Q19. Prove that ADE is an isosceles triangle if OD ⊥ AB and OE ⊥ AC.

Q20. The exterior angle formed by producing a side of a cyclic quadrilateral is equal to the interior opposite angle. Prove.

Q21. Show that ∠OMN = ∠ONM, if AB and CD are two equal chord.
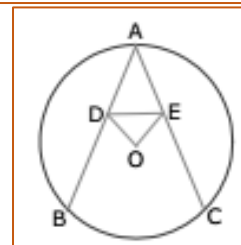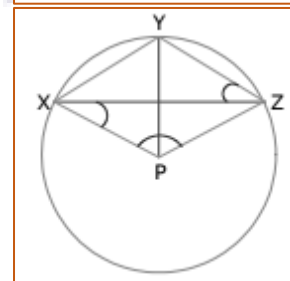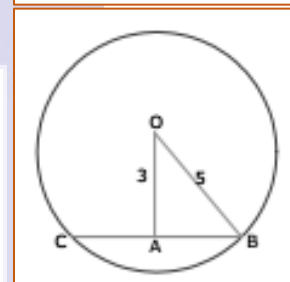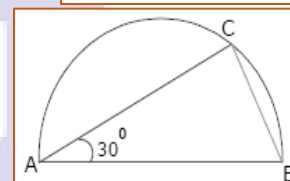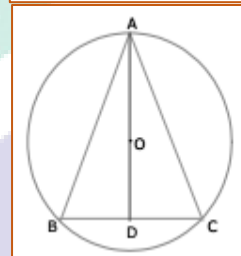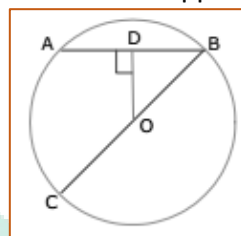
**Q22**. From the above question. Show that ∠BMN = ∠DNM.

Q23. ABCD is a quadrilateral in which AD=BC and ∠ADC = ∠BCD show A, B, C, D lie on a circle

Q24. Diagonal is also equal when pair of opposite sides of a cyclic quadrilateral are equal. Prove.

Q25. In isosceles triangle ABC, AD = AE and D and E are equal on side AB and AC. So prove that B,C,E and Δ are con cyclic

Q26. If two non – parallel sides of a trapezium are equal, prove that it is cyclic.

Q27. The bisector of B ∠ of an isosceles triangle ABC with AB = AC meets the circumcircle of ABC Δ at P if AP and BC produced meet at Q, prove that CQ = CA.

**Q28**. If a Pair of opposite sides of a cyclic quadrilateral are equal, then the diagram are also equal.
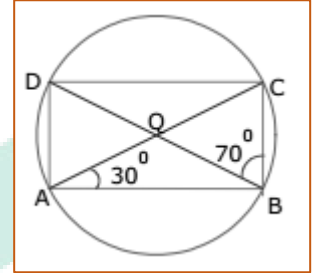
Q29. ∠DBC = 70° and ∠ CAB = 30° find ∠BCD.

Q30. OC radius equal to chord CD and AB is diameter and AC and BD produced meet at P so prove ∠CPD = 60°

Q31. Prove that the line joining the midpoint of the two parallel chords of a circle passes through the centre of the circle.
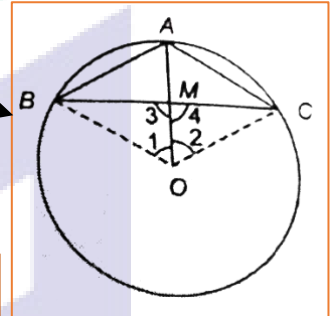
Q32. Prove that OA is the perpendicular bisector of BC if $\overarc{AB} \cong \overarc{AC}$

Q33. The two chords bisect each other AB and BD show that

    (i) AC and BD are diameter   (ii) ABCD is a rectangle

Q34. In ABCD cyclic quadrilateral diagonal Intersect at Q. ∠DBC = 70° and ∠CAB = 30°. So find ∠BCD.
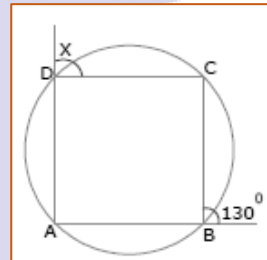
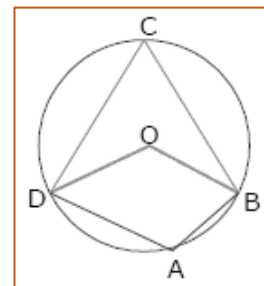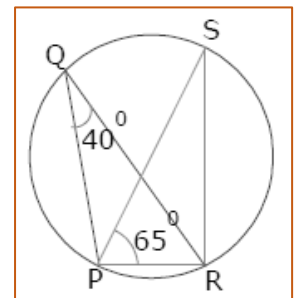**Q35**. Find the value of x if A, B, C, D are concyclic points.
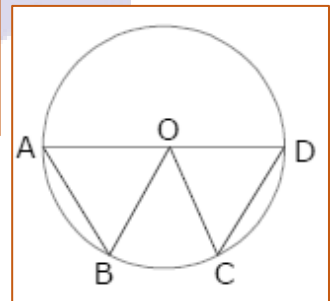
Q36. Show that ∠AOB = ∠COD of OA and OC is radius of circle. OB and OD is also a radius.

Q37. Prove that OM Bisect AB. If OM ⊥ AB.

Q38. Prove OM ⊥ AB if AB is chord of the circle with centre O. O is joined to the midpoint M and AB.

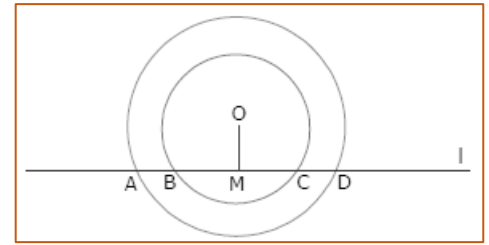**Q39**. ABCD is a cyclic quadrilateral in a circle with centre O. Prove that ∠A = ∠C = 180°.

Q40. Calculate the measure of ∠PQB, where O is the centre of the circle.
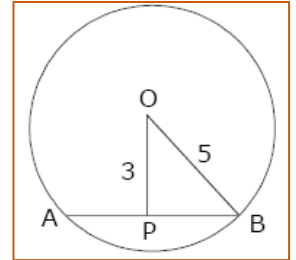
Q41. In the given Fig. ∠PQR = 40 ° ∠SPR = 65 ° find ∠SRP.

Q42. Find the length of AB, CD, AC and BD if two econometric circles with centre O have A, B, C, D as the Point of intersection with line ∠.

Q43. If OP ⊥ AB find the length of the chord AB.

Q44. OP ⊥ AB, OQ ⊥ CD, AB||CD. AB=6cm and CD = 8 cm, Determine PQ, and circle of radius 5 cm.

Q45. Show that ∠AHE and ∠EGC are supplementary. Given that ABC AEG and HEC are straight lines.